



Sanitary Infrastructure Division Update

Environmental Policy Commission
January 27, 2020



Agenda

- Environmental Action Plan – One Water Infrastructure Initiatives
 - Ongoing: RiverRenew Combined Sewer Project Coordination w/AlexRenew
 - Short-term action: Water conservation education and incentive program
 - Mid-term and long-term actions
- Sanitary Infrastructure Initiatives
 - Sewer Inspection and Rehabilitation Program
 - Fats, Oils, Grease Inspection Program
 - Sanitary Sewer Master Plan Update



Ongoing: RiverRenew

- Combined sewer tunnel project
 - 70 discharge events to 4 or less per year
 - Complete by July 1, 2025 (**mid-term action**)
- Design-Build (D-B) Process
 - Oct 2019: Shortlist of 3 D-B teams
 - Feb 2020: Request for proposals issued
 - Dec 2020: D-B Contract Notice to Proceed
- City's coordination role
 - DSUP reviews
 - Permitting: Construction haul routes, traffic closures, noise
 - Construction: Monitoring and inspection



Short-Term: Water Conservation

- FY2023: Provide education and consider incentive program
- Linked to 2020 Sanitary Sewer Master Plan Update
 - Recommendation to develop education materials, perform incentive study and fund in FY2022
- Incentive Program Study
 - Review of other programs around the Country
 - Recommend type(s) of incentives
 - Establish level of funding needed to roll out and implement

Mid-term and Long-term Actions

6.2.5

By FY2028, explore a reclaimed wastewater reuse partnership between the City and Alexandria Renew, including updating the technical and economic feasibility study for using reclaimed wastewater for irrigation of some of the larger open spaces in the city.

Cost Estimate: \$100,000

Cost Breakdown: Updating the previous study and coordinate with AlexRenew.



6.2.6

By FY2028, collaborate with Virginia American Water and regional partners to monitor, evaluate, and ensure safe and adequate water supply for the City now, and in the future.

Cost Estimate: \$10,000-\$25,000

Cost Breakdown: Required costs will be absorbed within City's operating budget



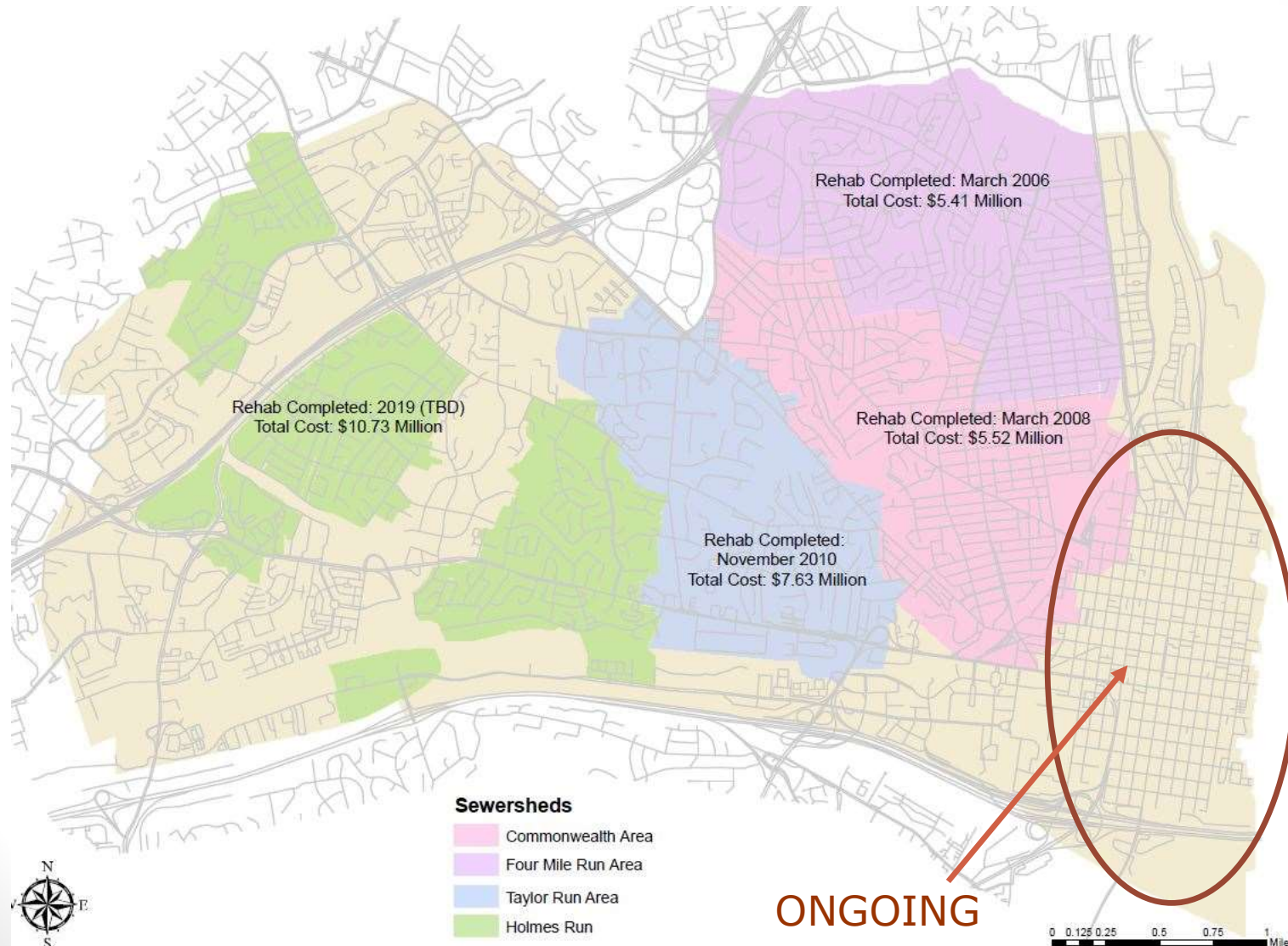


Sewer Inspection and Rehabilitation Program

- Program implemented in the late 1990s
- Over 60 miles of sewers and 3200 manholes rehabilitated
- Benefits:
 - Reduces sanitary sewer overflows into waterways
 - Reduces basement back-ups
 - Renews life of existing infrastructure
 - Reduces costly emergency repairs

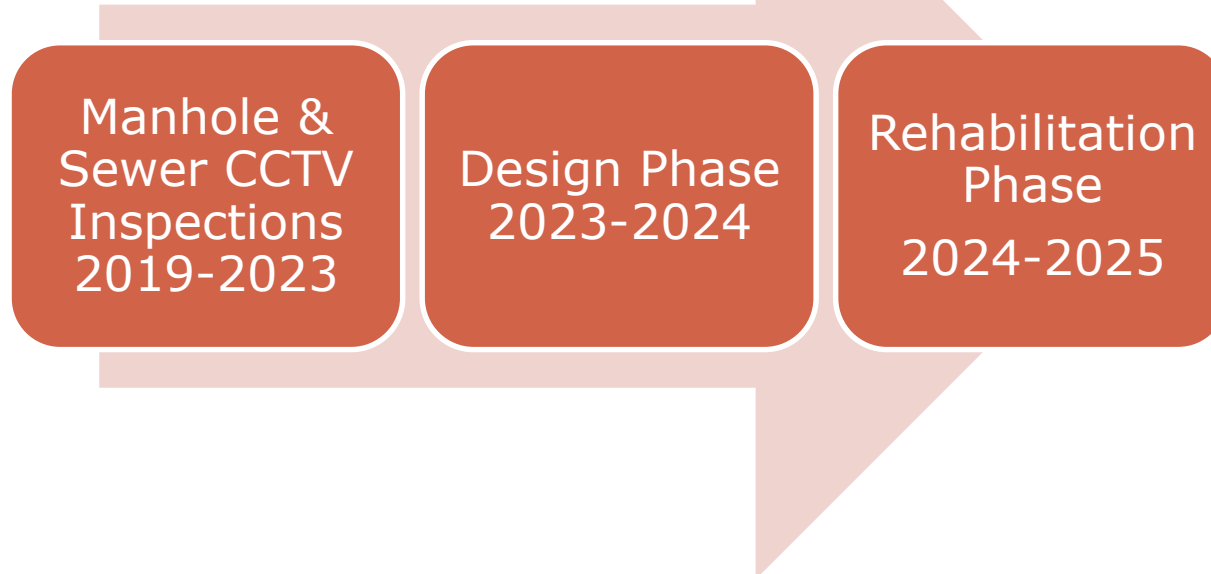


Sewer Inspection and Rehabilitation Program



Sewer Inspection and Rehabilitation Program

- Combined Sewer Area



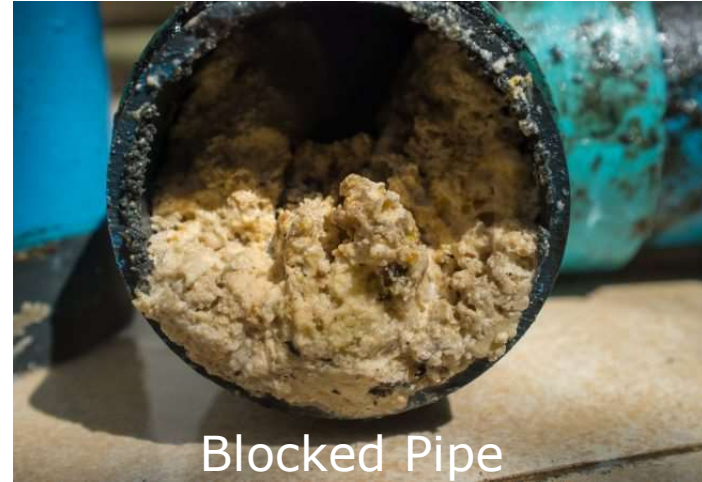
- FY2021: Develop inspection program for areas of the City not previously addressed



Fats, Oils, Grease (FOG) Program

- Sources of FOG – cooking oil, meat fats, food scraps, shortening, sauces, dairy products
- Adverse impacts
 - Reduce capacity of the sewer collection system
 - Contribute to sanitary sewer overflows into waterways
 - Contribute to sewer back-ups
 - Impacts wastewater treatment facility operations
 - Increases operational costs

Fats, Oils, Grease (FOG) Program



Blocked Pipe

<http://blog.kingspanenviro.com>

In a 2004 ... EPA identified that "grease from restaurants, homes, and industrial sources are the most common cause (47%) of reported blockages. Grease is problematic because it solidifies, reduces conveyance capacity, and blocks flow."



"Fatberg"

(businessinsider.com.au)

Fats, Oils, Grease (FOG) Program



- Work completed in 2019
 - Identified food service establishments (FSEs) located near "hot spot" areas
 - Performed 100 inspections
 - Provided education materials to all FSEs in City
 - Provided education materials to residents as part of Earth Day event



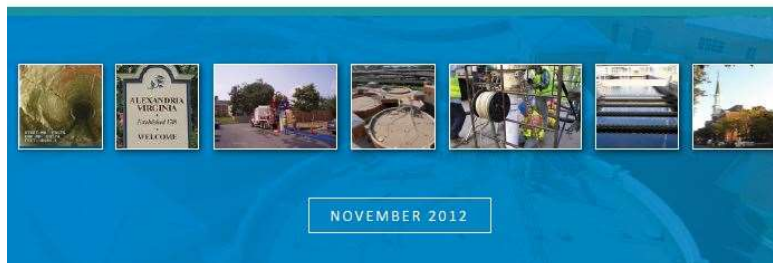


Sanitary Sewer Master Plan

- 2020 update ongoing
- Provides an overview of existing sewer system and programs/projects
- Identifies sewer and wastewater infrastructure needs to accommodate future growth
- Provides Capital Improvement Program
- Includes a review of existing revenue sources and funding model for future needs



City of Alexandria
VIRGINIA SANITARY SEWER MASTER PLAN





Questions

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